What is claimed is:

1. An ionization detector, comprising:

an ionization chamber configured to allow a sample fluid to flow through;

a first electrode;

a second electrode, the first and second electrodes capable of forming an electrical field in the ionization chamber; and

an optical window configured to allow a radiation beam to enter the ionization chamber, wherein a direction of propagation of the radiation beam in the ionization chamber is co-linear to a direction of flow of the sample fluid in the ionization chamber.

2. The ionization detector according to claim 1, further comprising a laser, wherein the radiation beam is a laser beam produced by the laser.

3. The ionization detector according to claim 2, wherein at least a portion of the first electrode forms a first area of an interior surface of the ionization chamber, and at least a portion of the second electrode forms a second area of the interior surface of the ionization chamber.

4. The ionization detector according to claim 3, wherein the sample fluid comprises gases.

5. A method for ionizing a sample fluid in an ionization chamber, comprising:

generating an electrical field in the ionization chamber;

directing a radiation beam into the ionization chamber such that a direction of propagation of the radiation beam in the ionization chamber is co-linear to a direction of flow of the sample fluid in the ionization chamber.